

DOCUMENT RESUME

ED 262 299

CG 018 534

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TITLE Elaboration Likelihood and the Counseling Process: The Role of Affect.
PUB DATE Aug 85
NOTE 19p.; Paper presented at the Annual Convention of the American Psychological Association (93rd, Los Angeles, CA, August 23-27, 1985).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Affective Behavior; Client Characteristics (Human Services); *Cognitive Processes; *Cognitive Style; *Counseling; *Depression (Psychology); Individual Differences
IDENTIFIERS *Elaboration

ABSTRACT

The role of affect in counseling has been examined from several orientations. The depth of processing model views the efficiency of information processing as a function of the extent to which the information is processed. The notion of cognitive processing capacity states that processing information at deeper levels engages more of one's limited cognitive processing capacity. The cognitive network theory posits that one's cognitive networks contain knowledge and memories connected through associative pathways. Some studies have shown that depressed individuals do not process as deeply as nondepressed individuals; others have shown the opposite effect. Differences have been found in the cognitive processes of depressives and nondepressives in the areas of problem solving abilities, attributional style, recall of feedback, expectancy changes following success and failure, self-perception of social competence, and recall of reinforcement and punishment histories. It has been theorized that depression can reduce an individual's task relevant processing and can produce a differential allocation of processing resources during the task. Research has shown that emotion influences such cognitive processes as free association, imaginative fantasies, social perceptions, and snap judgments about other's personalities. Depression may prime an individual to deeply process negative information to the exclusion of more positive information. A review of the literature suggests that eliciting negative feelings in some clients may encourage central processing of relevant information and eventual resolution of problems. (NRB)

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ED262299

**Elaboration Likelihood and the Counseling Process:
The Role of Affect**

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**Paper presented in M. Heesacker (chair) Symposium:
Counseling and the Elaboration Likelihood Model of Attitude
Change.**

American Psychological Convention
Los Angeles, California
August, 1985

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**Elaboration Likelihood and the Counseling Process:
The Role of Affect**

The role of affect in counseling and psychotherapy has been viewed as important from a number of orientations. Two important social psychological models of the counseling process have also addressed the role of affect in the process of persuasion, which they view as fundamental to counseling. Strong and Claiborn (1982) have conceptualized emotional arousal as a function of client need, which then increases the client's susceptibility to the therapist's influence in counseling. Petty and Cacioppo (1981, 1984) in their Elaboration Likelihood Model have viewed simple affective cues as more influential in attitude change when motivation and/or ability to process issue-relevant information is low than high. They cite a study by Gorn (1982, experiment 2) as supporting this cue function of affect. In the Gorn study, pleasant music was paired with an advertisement for a pen. The personal relevance of the ad was varied and results indicated that subjects preferred the pens for which information was supplied under conditions of high consequences, while preferring the pen advertised with pleasant music under low consequence conditions.

Searching other literatures for relevant guides to the role of emotion, particularly in information processing, we reviewed several theories that appear useful in this regard.

According to the depth of processing model, the efficiency of information processing is a function of the "depth", degree, or the extent to which the information is processed (Craik & Lockhart, 1972; Craik & Jacoby, 1975). Accordingly, "shallow" levels of processing demand little cognitive analysis, whereas "deeper" levels of processing demand more extensive cognitive analysis or effort (quite similar to peripheral and central route processing in the ELM). In general, the probability of information being fully perceived, processed, and encoded into memory is seen as a function of the depth to which the information is processed. That is, the more cognitive effort used, the greater the allocation of capacity or processing resources given to a specific task, the higher the probability that the information will be fully processed.

Related to the depth of processing model is the notion of cognitive processing capacity. According to Lachman, Lachman, and Butterfield (1979), individuals have a finite amount of processing capacity. Consequently, processing information at deeper levels engages a greater amount of the individual's limited cognitive processing capacity. On the other hand, shallow processing employs correspondingly less cognitive capacity.

An additional theory that appears compatible with these is the cognitive network theory (Anderson, 1976; Collins & Loftus, 1975; Bower, 1981), which posits that there exist

cognitive networks within an individual that contain both knowledge and memories which are connected through associative pathways. Bower (1981) suggests that these networks also contain affective structures that are labeled "primitive emotion nodes." When a particular network becomes active, it will facilitate the processing of information that is congruent with that network's contents. Additionally, larger and more elaborate networks can be seen as representing "deeper" levels of cognitive processing. The networks, therefore, can be conceptualized as the mechanism of cognitive analysis. Information that activates larger networks are processed more deeply because they have a larger number of cognitive associations linked to them. Ingram (1984) proposed that to facilitate the deep processing of information, the networks with which the information is congruent must be active. Information that is not congruent with the contents of the currently active networks will be processed with less depth.

The idea that affect influences memory and information processing has recently been receiving considerable attention (Bower, 1981; Clark, 1982; Ellis, 1983; Isen, 1975; Teasdale & Fogarty, 1979). In the "typical" experiment reported, subjects receive some sort of experimental instructions designed to induce a specific mood and subsequent effects on memory or information processing are then measured. A variety of effects have been noted, including state dependent

effects, mood congruence effects, a reduction in recall or recognition of the supposedly learned material, and a reduction in the effectiveness of organization in memory. It is generally observed that the induction of a dysphoric or depressed mood just prior to the processing of information leads to poorer memory or information processing.

Various differences have been noted in the cognitive processes of depressives and nondepressives. Some of the differences include problem-solving abilities (Mitchell & Madigan, 1984; Gotlib & Asarnow, 1979), attributional style (Kuiper, 1978; Rizley, 1978), recall of feedback (Nelson & Craighead, 1977; Ingram, 1984), expectancy changes following success and failure (Abramson, Garber, Edwards, & Seligman, 1978), self-perception of social competence (Lewinsohn, Mischel, Chaplain & Barton, 1980), and recall of reinforcement and punishment histories (Buchwald, 1977; Nelson & Craighead, 1977; Werner & Rehm, 1975).

Although depressives generally perform poorer than nondepressives on various memory tasks, some studies have shown depressives to be more efficient information processors. For example, it has been shown that depressives, compared to nondepressives, are better at perceiving and processing negative feedback than positive feedback (Ingram, 1984; Dykman & Volpicelli, 1983). From a depth of processing perspective, negative feedback is processed more deeply when subjects are primed by a prior negative mood induction.

Similarly, Ingram, Smith, & Brahm (1983) have shown that depressives are more efficient in processing negative self-referent adjectives. Finally, it has been shown that depressed people accurately judge their personal control, whereas nondepressives tend to succumb to a number of positive biases in overestimating their personal control (Alloy, Abramson, & Viscusi, 1981; Abramson & Alloy, 1980, 1981; Alloy & Seligman, 1979).

We have, then, an equivocal literature on mood and information processing. Some studies show that depressed individuals do not process as deeply or efficiently as nondepressed, whereas other studies show the opposite effect. How, then, can one accommodate these different findings?

There are several theories in the literature with both empirical and clinical evidence that may shed light on these findings. According to Ellis (1983) depression can have at least two kinds of effects on information processing. It can both quantitatively reduce the amount of task-relevant processing by the individual, and it can produce a differential allocation of processing resources during the task. Thus, depressed subjects may shift their processing resources and allocate fewer resources to the specific task at hand. Ellis' (1983) model, which is based on the limited capacity theory of information-processing, views emotional mood states as conditions which regulate the allocation of capacity given to any specific task to which the subject must

attend. Cognitive capacity or effort may be given to the specific experimental task at hand, or it may be allocated elsewhere. A similar idea was presented by Cacioppo, Petty, and Stoltenberg (1985) in discussing the ELM. Where low elaboration likelihood exists, the individual may attend to other nontask related activities.

When, then, does depression interfere with the processing of information, and when does it elicit increased cognitive processing? Do depressives tend to focus, concentrate, or allocate more of their cognitive capacity to certain tasks or stimuli in their environment than to others?

Easterbrook (1959) suggested that emotions narrow the focus of attention to affectively relevant events, and act to exclude other stimuli. Similarly, recent developments in cognitive theory have suggested that the relationship between cognition and affect is not as linear as was originally proposed. That is, not only can cognition influence affect, but affect can influence cognition (Bower, 1981; Zajonc, 1980). As Leventhal (1979) has suggested, emotional memory mechanisms within an individual may act to direct attention to specific features of the perceptual field. In a general sense, this is consistent with Neisser's (1976) resolution of the argument between the realist and the constructivist positions in cognitive psychology. An individual's construction of his/her world is neither completely subjective nor objective. Rather, people synthesize

information by selectively attending to (and processing) information in their environment.

The most fully articulated theory explaining how mood influences cognition follows a cognitive network model and was developed by Bower (1981). It should be recalled that, from this perspective, memory is conceptualized in terms of an associative network of semantic concepts and propositions. Activation spreads from one concept to another by associative linkages connecting them. According to Bower (1981), affective structures are built into the networks and, thus, mood is capable of activating particular networks. When an affective structure (primitive emotional node) is activated, it not only results in the experience of the specific emotion, but it also spreads activation into the particular networks with which it is associated. Thus, when the emotion of depression, for example, is activated depressive networks would be primed and the individual would tend to focus on (or recall) depressive type events. As a result, emotion should enhance the salience of mood-congruent material. That is, and individual should actively attend to, and process deeply, material that is consistent with his or her feelings.

Given Bower's theory, we would expect depressed individuals to focus on (elaborate) depressive type information, while elated individuals would be expected to focus on happy or positive type information. Support for this comes from both empirical studies and clinical theory

and observation. In a series of studies, Bower (1981) has shown that emotion influences such cognitive processes as free association, imaginative fantasies, social perceptions, and snap judgements about other's personalities. That is, angry subjects tended to generate angry associates, imagine angry fantasies, and find fault with others. In addition, subjects that were made depressed attended more to sad material than neutral or happy material, identified more with a sad character from a story, and recalled more of the sad material than the more positive material. Finally, in a recall test, subjects recalled a greater percentage of those experiences that were emotionally congruent with their mood. This final effect held true in a variety of tasks including recall of word lists, personal experiences recorded in a diary, and childhood experiences. Individuals in an elated mood recalled a greater percentage of pleasant experiences, whereas those in a depressed mood recalled a higher percentage of their unpleasant rather than pleasant memories. In a study by Lloyd and Lishman (1975), clinically depressed subjects were instructed to recall a happy or sad memory in response to a neutral word. Results showed that the more severe the depression, the longer it took the subject to recall a pleasant as opposed to an unpleasant memory. On the other hand, the more depressed the subject, the quicker s/he could recall an unpleasant memory.

A review of this empirical work suggests that the

current emotional state of an individual can influence his or her cognitive processes. It has certainly been shown that depression can, under certain circumstances, enhance information-processing. A negative affective state can predispose an individual to more deeply process information that is viewed as negative or unfavorable. It may be that depression primes an individual to deeply process negative information to the exclusion of more positive information. This proposition is consistent with Beck's (1967) model of depression. According to Beck, information processing in depression is discussed in terms of a cognitive schema. This schema consists of an organized memory structure containing self-referent attitudes, assumptions and beliefs. In depressives, this memory representation is primarily negative, characterized by a negative view of the self, the world, and the future. These views organize the way the individual evaluates, processes, and retains information. This depressive schema, then, is responsible for the negative biases found in depressed people. Similar to the empirical studies mentioned, Beck's theory suggests that depressives are "primed" by their affect to attend to and process depressing information, often in a negative manner.

In a preliminary attempt to apply this literature to the ELM, Avery Bratt, Rodney Flanary, and I adapted a typical persuasion paradigm to study the effects of mood on information processing. The institution of senior

comprehensive exams was chosen as the advocacy to be communicated to the subjects due to its counterattitudinal nature for most college students. The issue was made personally relevant by informing the students that the exams would be instituted at Texas Tech the following year, thus having personal consequences for the subjects. We varied argument quality from high to low and tested both the topic and the arguments to assure their intended effects. We chose to induce both depressed and elated moods using the Velten (1968) technique which proved effective. We expected the counterattitudinal nature of the advocacy to strike a note with our depressed or dysphoric subjects so that the likelihood of increased elaboration of the arguments would be increased. This was not expected for the elated subjects. Our results supported this prediction as subjects in both the depressed and elated conditions evidenced similar levels of favorable attitudes toward the recommendation when presented with high quality or cogent arguments. When weak arguments were presented supporting the recommendation, however, differences between the conditions were found. The elated group rated the recommendation as favorable as had both groups in the strong argument condition. However, the depressed group appeared to have processed the weak supporting arguments more thoroughly and rated the recommendation significantly less favorably. Thus, the depressed subjects appeared to be influenced more by the

quality of the arguments than the elated group for a counterattitudinal advocacy under high involvement conditions.

These results fit intuitively with common practices in counseling and psychotherapy. The importance for many counselors of getting the client to experience appropriate (often negative) feelings during a session in order to enhance problem solving would appear to be taking advantage of the increased depth of processing of personally relevant information elicited by congruent moods. I suspect that most of us who engage in counseling and psychotherapy have had experiences with clients who either refuse or appear unable to explore certain problem areas when the pain associated with those problems is no longer present. Given this review, it may be appropriate to attempt to elicit the negative feelings in these clients in order to encourage central processing of relevant information and eventual resolution of the problems.

We would be remiss, however, not to note that there is probably a curvilinear relationship between depression and the ability or motivation to process information in a deep or central manner. Extreme or clinical depression is likely to have deleterious effects on both memory and information processing (e.g. Beck, 1967, 1974; Henry, Weingartner, & Murphy, 1973). Finding optimum levels of sadness or depression in clinical settings, however, should prove to be

an important avenue for counseling research. Likewise, investigating the interaction of other factors identified as important by the ELM with mood (e.g. source credibility, proattitudinal advocacies, etc.) would also aid in understanding the interpersonal influence process.

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